

9-bis(4-(meth)acryloyloxymethoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(2-(meth)acryloyloxyethoxy)-3-methylphenyl)fluorene, 9,
9-bis(4-(2-(meth)acryloyloxypropoxy)-3-methylphenyl)fluorene, 9,
9-bis(4-(3-(meth)acryloyloxypropoxy)-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydimethoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydiethoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydiproxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytrimethoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytrithoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytripropoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetramethoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetraethoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetrapropoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxymethoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(2-(meth)acryloyloxyethoxy)-3-ethylphenyl)fluorene, 9,
9-bis(4-(2-(meth)acryloyloxypropoxy)-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydimethoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydiethoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydiproxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytrimethoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytrithoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytripropoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetramethoxy-3-ethylphenyl)fluorene, 9,

9-bis(4-(meth)acryloyloxytetraethoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetrapropoxy-3-ethylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxymethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(2-(meth)acryloyloxyethoxy)-3-propylphenyl)fluorene, 9,
9-bis(4-(2-(meth)acryloyloxypropoxy)-3-propylphenyl)fluorene, 9,
9-bis(4-(3-(meth)acryloyloxypropoxy)-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydimethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydiethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxydipropoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytrimethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytrioethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytripropoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetramethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetraethoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxytetrapropoxy-3-propylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxy-(2-hydroxy)propoxyphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxy-(2-hydroxy)propoxy-3-methylphenyl)fluorene, 9,
9-bis(4-(meth)acryloyloxy-(2-hydroxy)propoxyethoxyphenyl)fluorene,
bisphenolfluorene dihydroxyacrylate, namely an acrylic acid adduct of 9,
9-bis(4-hydroxyphenyl)fluorene glycidyl ether (produced by Nippon Steel
Chemical Co., Ltd.), bisphenolfluorene dimethacrylate (produced by Nippon
Steel Chemical Co., Ltd.), bisphenoxyethanolfluorene diacrylate (BPEF-A
produced by Osaka Gas Co., Ltd.), bisphenoxyethanolfluorene
dimethacrylate (BPEF-MA produced by Osaka Gas Co., Ltd.),

bisphenoxyethanolfluorene diepoxyacrylate (BPEF-GA produced by Osaka Gas Co., Ltd.), bisphenolfluorene diepoxyacrylate (BPF-GA produced by Osaka Gas Co., Ltd.), biscresolfluorene diepoxyacrylate (BCF-GA produced by Osaka Gas Co., Ltd.) and the like.

Particularly preferred fluorene compounds are bisphenolfluorene dihydroxyacrylate, namely an acrylic acid adduct of 9,9-bis(4-hydroxyphenyl)fluorene glycidyl ether (produced by Nippon Steel Chemical Co., Ltd.), bisphenolfluorene dimethacrylate (produced by Nippon Steel Chemical Co., Ltd.), bisphenoxyethanolfluorene diacrylate (BPEF-A produced by Osaka Gas Co., Ltd.), bisphenoxyethanolfluorene dimethacrylate (BPEF-MA produced by Osaka Gas Co., Ltd.), bisphenoxyethanolfluorene diepoxyacrylate (BPEF-GA produced by Osaka Gas Co., Ltd.), bisphenolfluorene diepoxyacrylate (BPF-GA produced by Osaka Gas Co., Ltd.), biscresolfluorene diepoxyacrylate (BCF-GA produced by Osaka Gas Co., Ltd.) and the like.

The fluorene-based compound can be an oligomer such as a dimer or a trimer of the above-mentioned compound.

These exemplified compounds can be used solely or in combination.

Next, the sulfide-based cyclic compound [II] is described.

In the general formula [II] of the sulfide-based cyclic compound, the circle represents cyclic structure, Y_1 is a ring member atom constituting the ring, and "m" is the number of the constituent atom Y_1 of the ring, namely the member number of the ring. "m" is preferably 5 to 8, more preferably 5 or 6, the most preferably 6. The plural atoms $(Y_1)_m$ can be all carbon atoms (in this case, the ring is a carbon ring), or a portion of the plural